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hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV543594336US, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 2313-1450, on the date shown below.

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Docket No.: ASZD-P01-837 (PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Butters et al.

Application No.: 10/528612

Confirmation No.: 4145

Filed: March 21, 2005

Art Unit: 1614

For:

PROCESS AND INTERMEDIATES FOR

THE PREPARATION OF THIENOPYRROLE

DERIVATIVES

Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application as required by 37 CFR 1.98(a)(2)(i), amended October 2004, as the U.S. Patent and Trademark Office has waived this requirement for all U.S. patent applications. Applicant submits herewith copies of foreign and non-patents in accordance with 37 CFR 1.98(a)(2).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this

Application No.: 10/528612 Docket No.: ASZD-P01-837

Information Disclosure statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 18-1945, under Order No. ASZD-P01-837.

Dated: <u>August 22, 2005</u>

Respectfully submitted,

David P. Halstead, Ph.D.

Registration No.: 44,735 FISH & NEAVE IP GROUP

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Complete if Known Substitute for form 1449A/B/PTO 10/528612 Application Number INFORMATION DISCLOSURE March 21, 2005 Filing Date STATEMENT BY APPLICANT First Named Inventor Michael Butters Art Unit 1614 (Use as many sheets as necessary) Examiner Name Not Yet Assigned

Attorney Docket Number

U.S. PATENT DOCUMENTS							
Carringo Cite		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear			
	AA*	US-2004/0048878-A1	03-11-2004	Cai et al.			
	AB*	US-2004/0220229-A1	11-04-2004	Bussolotti et al.			

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	FOREIGN PATENT DOCUMENTS									
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	\prod_{i}				
Initials*	No.1	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document						
	ВА	EP-1088824 A2	04-04-2001			Г				
	BB	EP-1136071 A3	03-26-2003			П				
	ВС	WO-1994/18196 A1	08-18-1994			Г				
	BD	WO-2001/28993 A2	04-26-2001	•						
	BE	WO-2002/06246 A1	01-24-2002			П				
	BF	WO-2002/20530 A1	03-14-2002			Т				
	BG	WO-2003/074484 A1	09-12-2003			Γ				
	вн	WO-2003/074485 A2	09-12-2003			Г				
	ВІ	WO-2003/074513 A2	09-12-2003			П				
	BJ	WO-2003/074517 A1	09-12-2003							
	BK	WO-2003/074531 A1	09-12-2003	· · · · · ·						
	BL	WO-2003/074532 A1	09-12-2003			П				
	ВМ	WO-2003/091213 A1	11-06-2003			Г				
	BN	WO-2004/041780 A2	05-21-2004							
	ВО	WO-2004/058715 A1	07-15-2004		Abstract only					
	BP	WO-2004/113345 A1	12-29-2004			Π				

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NON PATENT LITERATURE DOCUMENTS							
Examiner Initials	* 1 manazine journal serial symposium catalog etc.) date page(s) volume-issue number(s) publ		T ²				
	CA	Adams et al., "4-Amino-4,5-dihydrothiophene-2-carboxylic acid," J. Org. Chem. 50:2730-2736 (1985)					
	СВ	Binder et al., "Eine einfache herstellungsmethode fur 2-aminothiophene," Synthesis Communications 4:255-256 (1977)					
	СС	Binder et al., "Thiopen als strukturelement physiologisch aktiver substanzen, 8. mitt. 1H5H-imidazo[1,2-a]thieno[3,4-d]pyrimidin-2(3H-one," Arch Pharm. 314:556-564 (1981)					
	CD	Bjork et al., "Improved syntheses of thieno[2,3-b]- and [3,2-b]-fused naphthyridines," J. Heterocyclic Chem. 32:751-754 (1995)					

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PTO/SB/08a/b (07-05)
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				Application Number	10/528612	
11	NFORMATIO	N DI	SCLOSURE	Filing Date	March 21, 2005	
S	TATEMENT	BY A	APPLICANT	First Named Inventor	Michael Butters	
				Art Unit	1614	
	(Use as many s	heets as	necessary)	Examiner Name	Not Yet Assigned	
Sheet	2	of	3	Attorney Docket Number	ASZD-P01-837	

CE	Boger et al., "Total synthesis of distamycin A and 2640 analogues: A solution-phase combinatorial approach to the discovery of new, bioactive DNA binding agents and development of a rapid, high-throughput screen for determining relative DNA binding affinity or DNA binding sequence selectivity," J. Am. Chem. Soc. 122:6382-6394 (2000)
CF	Brugier et al., "α-Substitution of β-thienylcarbamates: alkylation, vinylation and Pd-catalyzed coupling reactions," Tetrahedron 56:2985-2993 (2000)
 CG	Brugier et al., "Studies on the reactivity of N-(3-thienyl)carbamates," J. Chem. Soc., Perkin Trans. 1:37-43 (2001)
СН	Brugier et al., "Synthesis and reactivity of alkyl (4-aminothien-3-yl)carbamates," Tetrahedron 53(30):10331-10344 (1997)
CI	Brunnett et al., "Heterocyclic amines. IV. Urethan and urea derivatives of 3-aminothiophene (1)," J. Heterocyclic Chem. 5(3):417-418 (1968)
CJ	Carroll et al., "Competitive ortho metalation effects: the kinetic and thermodynamic lithiation of 3-(tert-Butoxycarbonyl)amino-4-caromethoxythiopene," Tetrahedron Letters 38(15):2637-2640 (1997)
CK	Eras et al., "Reactivity of theinopyrroles. synthesis of isomeric nitro and bromothienopyrroles," J. Heterocyclic Chem. 21:215-217 (1984)
CL	Galvez et al., "Synthesis of isomeric β-haloethylthienopyrroles," J. heterocyclic Chem., 21, 393-395 (1984)
СМ	Galvez et al., "Synthesis of thiophenedicarbonyldiazides and Di-t-butyl thiophendicarbamates," J. Heterocyclic Chem. 23:1103-1108 (1986)
 CN	Jones et al., "The vilsmeier reaction of fully conjugated carbocycles and heterocycles," Organic Reactions 49:1-39 (1997)
СО	Kobayashi et al., "Heterocyclic sulfonyl compounds and activated blood coagulation factor X (FXa) inhibitors containing them," Chemical Abstracts XP002267904 & JP 2001 294572 (2001)
СР	Linda et al., "The mechanism of the Vilsmeier-Haach reaction. Part III. Structural and solvent effects," J. Chem. Soc. Perkins Trans II, 1610-1612 (1974)
CQ	Marques et al., "Toward an understanding of the chemical etiology for DNA minor-groove recognition by polyamides," Helvetica Chimica acta 85:4485-4517 (2002)
CR	Martin et al., "Nucelar magnetic resonance investigations of carbonium ion intermediates. Part II. Exchange reactions in chloro-iminium salts (Vilsmeier-Haack reagents)," Journal Chem. Soc., Perkins Trans II 642-646 (1974)
CS	Martin et al., "Recherches sur la reaction de vilsmeier-haack etude du mecanisme de formation du complexe par des mesures cinetiques en resonance magnetique nucleaire," Tetrahedron Letters 58:5061-5064 (1970)
СТ	Meth-Cohn et al., "A versatile new synthesis of quinolines and related fused pyridines. Part II.," Tetrahedron Letters 33:3111-3114 (1979)
CU	Meth-Cohn et al., "A versatile new synthesis of quinolines and related fuses pyridines. Part 7. The conversion of acetamidothiophens into thienopyridines," Journal Chem. Soc., Perkins Trans. I 1531-1536 (1981)
CV	Meth-Cohn et al., "A versatile new synthesis of quinolines, thienopyridines and related fused pyridines," Tetrahedron Letters 23:2045-2048 (1978)
 CW	Meth-Cohn et al., "The preparation and formylation of 2-acetamidothiophenes," Synthesis 2:133-135 (1980)
CX	Nakamura, "Construction of heterocyclic compounds by use of alpha-diazaphosphonates: new one-pot syntheses of indoles and isocoumarines," Organic Letters 4(14)2317-2320 (2002)

Examiner		Date	
	•	Jaco	
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PTO/SB/08a/b (07-05)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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				Application Number	10/528612	
IN	FORMATIC	N DISC	CLOSURE	Filing Date	March 21, 2005	
S1	TATEMENT	BY AF	PLICANT	First Named Inventor	Michael Butters	
				Art Unit	1614	
	(Use as many sheets as necessary)			Examiner Name	Not Yet Assigned	
Sheet	3	of	3	Attorney Docket Number	ASZD-P01-837	

CY	Rajanna et al., "Kinetics adn mechansim of vilemeier-haach synthesis of 3-formyl chromones derived from o-hydroxy aryl alkyl ketones: A structure reactivity study," Tetrahedron 52(10):3669-3682 (1996)	
CZ	Seela et al., "168. Synthesis of 2'-deoxyribofuranosides of 8-Aza-7-deazaguanine and related pyrazolo[3,4-d]pyrimidines," Helvetica Chimica Acta 69:1602-1613 (1986)	
CA1	Shinkwin et al., "Synthesis of thiophenecarboxamides, thieno[3,4-c]pyridin-4(5H)-ones and Thieno[3,4-d]pyrimidin-4(3H)-ones and preliminary evaluation as inhibitors of poly(ADP-ribose)polymerase (PARP)," Bioorganic & Medicinal Chemistry 7:297-308 (1999)	
CB1	Shvedov et al., ""2-Aminothieno '2,3-b]pyridine derivatives, Chemical Abstracts, XP002266826 & SU364613 (1973)	
CC1	Soth et al., "Recherches en serie heterocyclique. XXIX. Sur des voies d'acces a des thieno, selenolo, furo et pyrrolopyrroles," Canadian Journal of Chemistry 56(6):1429-1434 (1978)	
CD1	Stanetty et al., "Herbizide thienylharnstoffe, I," Monatshefte fur Chemie 120:53-63 (1989)	
CE1	Sugiyama et al., "Condensed thienopyrimidines. IV. Synthesis and gastric antisecretory activity of 2,3-dihydro-5H-oxazolothienopyrimidine derivatives," Chemical & Pharmaceutical Bulletin 37(10):2171-2722 (1989)	
CF1	Sugiyama et al., "Condensed thienopyrimidines. 5. Studies on the thermal cyclization of various ortho-formylthiophenecarbamates with ethanolamine," Heterocycles 29(7):1317-1323 (1989)	
CG1	Szabo et al, "Experimental and theoretical study of orientation in the nitration of dithieno[3,4-b:3',4'-d]pyridine," J. Organic Chem 56:1590-1596 (1991)	

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